



SUBSTITUTE SPECIFICATION-CLEAN VERSION

IR 3712 NP

IMPROVED BOTTLE CONTACT COATING APPARATUS AND IMPROVED SPONGES FOR USE THEREIN

*GRAY
TO ENTER
IN 9/20/05*

This application claims benefit, under U.S.C. §119(e) of US provisional application 60/458,307, filed March 28, 2003.

FIELD OF THE INVENTION

[0001] Application of liquid to the outside surface of a bottle that is moving on a conveyor path usually at high speeds has been practiced commercially. The apparatus for applying a liquid coating are designed to either spray the liquid onto the bottle or designed for direction application (contact coating) through contacting the bottle with an applicator containing the liquid which results in transfer of liquid onto the bottle surface. Such apparatus for coating a liquid onto the surface of a bottle or container are well known to those skilled in the art. One type of coating apparatus involving direct contact between the bottle and an applicator containing the liquid utilizes a foamed rubber sponge as the liquid containing applicator that touches the bottle. The present invention concerns an improved sponge design for applying liquid onto the surface of a container.

[0002] A machine for direct contact coating of bottles is usually equipped with a sponge that transfers the coating liquid to the bottles and a belt that drives the bottles along the sponge and rotates the bottle while contacting the sponge. The contact coating apparatus is placed over a conveyor belt that transports bottles usually in a plant that utilizes bottles in a manufacturing process such as a filling plant. The rotating belt and the usually static sponge of the coating machine form a coating lane through which the bottles must pass while being transported on the conveyor belt. The bottle rotates while contacting the sponge. While the bottle is revolving and